

WEILAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Adjant property:	to Roture Dulling o	ity/County: Crustal	Ciry Treason	Sampling Date: 10-18-11
pplicant/Owner Darriel Color	W. A.		State: MO	Sampling Point:
investigator(s): Crank			nge: S 7 TYON	
Landform (hillslope, terrace, etc.):				
	TEN PLATEN CASE		.39" W	
Slope (%): 0-3 % Lat: 3312 24	1 C 1+1 (U:1/47)			
Soil Map Unit Name: 66014 Hay				ation: PFOIL Paluskings F.
Are climatic / hydrologic conditions on the		,	(if no, explain in R	emarks.)
Are Vegetation 10, Soil 10, or H	lydrology no significantly di	sturbed? Are	"Normal Circumstances" r	present? Yes No
Are Vegetation, Soil, or H	ydrology 10 naturally probl	ematic? (if ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Att	ach site map showing s	ampling point I	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes No	is the Sampled	Aron	
Hydric Soll Present?	Yes No	within a Wetlan		No
Wetland Hydrology Present?	Yes No	Within a World		
Remarks:		1		•
			٠,	
VEGETATION - Use scientific na	ames of plants.			,
Tree Stratum (Plot size:		Dominant Indicator Species? Status	Dominance Test work	·
1.		Stretces: Status	Number of Dominant S That Are OBL, FACW,	
2.			I Ital Are Obe, I Activ,	(A)
3.			Total Number of Domin	
4.			Species Across All Stra	ta: (B)
			Percent of Dominant S	
7	06 F+=	Total Cover	That Are OBL, FACW,	OFFAC: (A/B)
Sapling/Shrub Stratum (Plot size:	5 [4)		Prevalence Index wor	ksheet:
1. Cephalanthus Occiden		Y DSL	Total % Cover of:	Multiply by:
2. (Button B.	<u>sL)</u>		OBL species 35 3	x1= 135
3			FACW species	x2=
4			FAC species	x3=
5			FACU species	×4=
790	2 <u>25</u> =	Total Cover	UPL species	x5=
Herb Stratum (Plot size: 7 8 f+			Column Totals: <u>35</u>	(A) <u>35</u> (B)
1. Cyperus Acuminatus 2. (Fratsidge)		A .085	Provalence Indev	= B/A =
			Hydrophytic Vegetation	
3.			✓ Dominance Test is	
4		· · · · · · · · · · · · · · · · · · ·	Prevalence Index i	
56			l ——	ptations ¹ (Provide supporting
7			data in Remark	s or on a separate sheet)
			Problematic Hydro	phytic Vegetation¹ (Explain)
8				
9				l and wetland hydrology must
		Total Cover	be present, unless distr	urbed or problematic.
Woody Vine Stratum (Plot size:		Total Cover	,	
1		,	Hydrophytic	
· · · · · · · · · · · · · · · · · · ·			Vegetation	s X No
)		Total Cover	Present? Ye	D
Remarks: (Include photo numbers here	or on a constate short			·
Flatsed La anges &	-	A Th	aum el	unvenatified

Mudflat. Area appears to be inundated for a large put of the year.

0-9 9-16	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	1041512	-				C	M	SICL	
-	10yr 5/1				w	C	M		
								-	
Y 0/		-				-			
									
-								2	
ype: C=Cor dric Soil In		letion, RM=	Reduced I	Matrix, C	S=Covere	d or Coat	ed Sand G	Indicators for	on: PL=Pore Lining, M=Matrix. r Problematic Hydric Soils ³ :
Histosol (Sandy	Gleyed Ma	atrix (S4)			airie Redox (A16)
. ,	pedon (A2)				Redox (St				ganese Masses (F12)
Black His			_		d Matrix (plain in Remarks)
	Sulfide (A4)				Mucky Mi				•
	Layers (A5)		Madeston	Loamy	Gleyed M	atrix (F2)			
2 cm Muc			X	Deplete	ed Matrix ((F3)			
	Below Dark Surface	e (A11)			Dark Surfa				
	k Surface (A12)		***************************************		d Dark St)		hydrophytic vegetation and
	icky Mineral (S1)		X	Redox	Depressio	ns (F8)			ydrology must be present,
	ky Peat or Peat (S3							unless dis	sturbed or problematic.
strictive La	yer (if observed):								
								1	
Type:								1	~
	nes):							Hydric Soll Pr	esent? Yes X No
-			-					Hydric Soll Pr	esent? Yes No
Depth (inch					- -			Hydric Soli Pr	esent? Yes No No
Depth (inch marks:	nes):						a Algorithm and the second	Hydric Soli Pr	esent? Yes No No
Depth (inchmarks:	nes):			·				Hydric Soli Pr	esent? Yes No No
Depth (inch marks: DROLOG	nes):			all that ar	oply)				
Depth (inch marks: DROLOG tland Hydr mary Indica	es):		ed; check		oply)	ves (B9)		Secondary	
DROLOG Itland Hydr mary Indica Surface W	rology Indicators: tors (minimum of or		ed; check :	Vater-Sta	ined Leav		žu5	Secondary X Surface	Indicators (minimum of two requires Soil Cracks (B6)
DROLOG etland Hydr mary Indica Surface W High Wate	ology Indicators: tors (minimum of or /ater (A1) er Table (A2)		ed; check :	Vater-Sta	ined Leav auna (B13) Muss	eus.	Secondary X Surface X Draina	Indicators (minimum of two requires Soil Cracks (B6)
DROLOG Surface W High Wate Saturation	rology Indicators: tors (minimum of or /ater (A1) er Table (A2)		ed; check :	Vater-Sta quatic Fa rue Aqua	ined Leav auna (B13 atic Plants	(B14)	ELS	Secondary X Surface X Drainag Dry-Se	Indicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
DROLOG tland Hydr mary Indica Surface W High Wate Saturation Water Mai	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1)		ed; check : V A T	Vater-Sta quatic Fa rue Aqua lydrogen	ined Leav auna (B13 atic Plants Sulfide O	(B14) dor (C1)		Secondary X Surface X Drainag Dry-Se Crayfis	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
DROLOG tland Hydr mary Indica Surface W High Wate Saturation Water Man Sediment	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2)		ed; check : V T H	Vater-Sta quatic Fa rue Aqua lydrogen xidized I	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Liv	ving Roots	Secondary X Surface X Draina Dry-Se Crayfis (C3) X Satural	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9
DROLOG tland Hydr mary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3)		ed; check : V T H C P	Vater-Sta quatic Fa rue Aqua lydrogen Oxidized I resence	lined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Lived Iron (C	ving Roots	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Saturat Stunted	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
DROLOG Itland Hydr mary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)		ed; check :	Vater-Sta quatic Fa rue Aqua lydrogen Oxidized I resence	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction	(B14) dor (C1) eres on Lived Iron (C	ving Roots	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
DROLOG Itland Hydr mary Indica Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depo:	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	ne Is requir	ed; check :	Vater-Sta quatic Fa rue Aqua lydrogen Exidized I resence lecent Iro hin Muck	ined Leavanna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7)	ving Roots	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requi e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9 d or Stressed Plants (D1)
DROLOG Itland Hydr mary Indica Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depoi	rology Indicators: tors (minimum of orlater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial In	ne Is requir	ed; check : V X_ A T H C P R T	Vater-Sta quatic Fa rue Aqua lydrogen Oxidized I resence lecent Iro hin Muck Gauge or	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction Surface (Well Data	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	ving Roots	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
DROLOG Surface W High Water Man Sediment Drift Depo Algal Mater Iron Depoi	rology Indicators: tors (minimum of or tater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial In tegetated Concave	ne Is requir	ed; check : V X_ A T H C P R T	Vater-Sta quatic Fa rue Aqua lydrogen Oxidized I resence lecent Iro hin Muck Gauge or	ined Leavanna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	ving Roots	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
DROLOG Introduced Surface W High Water Man Sediment Drift Depo Algal Mat Iron Depoil Inundation Sparsely V Id Observa	rology Indicators: tors (minimum of or tater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial In tegetated Concave	ne is requir magery (B7 Surface (E	ed; check:	Vater-Sta quatic Fa rue Aqua lydrogen exidized Fa resence decent Iro hin Muck Sauge or exter (Exp	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction Surface (Well Data plain in Re	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	ving Roots 4) d Soils (C	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
DROLOG Surface W High Water Mai Sediment Drift Depo Algal Mat Iron Depo: Inundation Sparsely V Id Observa	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) er Visible on Aerial In /egetated Concave entions: Present?	magery (B7 Surface (B	ed; check : X A T H C P R 10 10 10 10 10 10 10 10 10	Vater-Sta quatic Farue Aquatic lydrogen Dxidized Faresence decent Iro hin Muck Gauge or Other (Exp	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Surface of Well Data plain in Resuches):	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	ving Roots 4) d Soils (C	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
DROLOG etland Hydr mary Indica Surface W High Water Mar Sediment Drift Depo Algal Mat Iron Depoi	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) or Visible on Aerial In /egetated Concave utions: Present? Yes	magery (B7 Surface (E	ed; check : X A T H S BB) — G	Vater-Sta quatic Fa rue Aqua lydrogen Dxidized Fa resence secent Irc hin Muck Gauge or Dther (Exp Depth (in	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Surface (Well Data plain in Reduction (Surface) (Well Data plain in Reduction)	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) ermarks)	ving Roots 4) d Soils (Co	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Saturat Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
DROLOG etland Hydr mary Indica Surface W High Water Man Sediment Drift Depo Algal Mat Iron Depoi Inundation Sparsely V Id Observa face Water tter Table Presuration Pres	rology Indicators: tors (minimum of orlater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial Independent of the concaverations: Present? Yesent? Yesent? Yesent?	magery (B7 Surface (E	ed; check : X A T H C P R 10 10 10 10 10 10 10 10 10	Vater-Sta quatic Fa rue Aqua lydrogen Dxidized Fa resence secent Irc hin Muck Gauge or Dther (Exp Depth (in	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Surface (Well Data plain in Reduction (Surface) (Well Data plain in Reduction)	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) ermarks)	ving Roots 4) d Soils (Co	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (inchmarks: DROLOG etland Hydr mary Indica Surface W High Water Mai Sediment Drift Depo Algal Mat Iron Depoi Inundation Sparsely V Id Observa face Water ter Table Pi uration Pre-	rology Indicators: tors (minimum of orlater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial Independent of the concaverations: Present? Yesent? Yesent? Yesent?	magery (B7 Surface (B	ed; check : X A T H SB) — G No X	Vater-Sta quatic Farue Aquatic lydrogen Dxidized Faresence Recent Iro hin Muck Bauge or Other (Exp Depth (in Depth (in	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Surface Well Data plain in Reduction (Surface) Well Data plain in Reduction (Surface)	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) ermarks)	ving Roots 4) d Soils (Co	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (inchimarks: DROLOG etland Hydrimary Indica Surface Wigh Water Mail Sediment Drift Depo Algal Matiliron Depoil Iron Depoil Iron Depoil Iron Depoil Iron Depoil Iron Sparsely Water Table Political	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) o Visible on Aerial In /egetated Concave /tions: Present? resent? ye sent? ye ary fringe)	magery (B7 Surface (B	ed; check : X A T H SB) — G No X	Vater-Sta quatic Farue Aquatic lydrogen Dxidized Faresence Recent Iro hin Muck Bauge or Other (Exp Depth (in Depth (in	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Surface Well Data plain in Reduction (Surface) Well Data plain in Reduction (Surface)	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) ermarks)	ving Roots 4) d Soils (Co	Secondary X Surface X Drainag Dry-Se Crayfis (C3) X Satural Stunted X Geomo	Indicators (minimum of two requires Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Adjacent property to lutury	Drilling	City/Co	ounty	: Cystr	CITY / JESTEN Sampling Date: 10-18-11
pplicant/Owner Dara / Culen	<u> </u>				State: Mo Sampling Point: 2
investigator(s): Granke		Section	n, To	wnship, Ra	nge: S7 T40N R6E
Landform (hillslope, terrace, etc.): Cutoff Slovel	Channel	ARE	A	Local relief	(concave, convex, none): Con chive
Slope (%): 0-36/2 Lat: 38 /2 20.66"N					US . 85" W Datum: 5" Ringe - Mend
Soil Map Unit Name: Derble Sil+ Loam/					
Soil Map Unit Name. DOI DE SITE DESIGNATION OF THE SITE OF THE SIT					SCRUB SMUBLL
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar/ Ye	es!	NO_	(If no, explain in Remarks.)
Are Vegetation	Ignificantly:	disturb	ed?	Are '	Normal Circumstances" present? Yes Ves No
Are Vegetation, Soil	aturally pro	blemat	tic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sam	plin	g point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No.	o	1	la th	e Sampled	Aron
1	·			in a Wetla:	
Wetland Hydrology Present? Yes No.	·	-	WILL	iii a tteliai	iur resNo
Remarks:			-		
VEGETATION – Use scientific names of plants.					
2022 (12	Absolute			Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 2827 ft)	% Cover	Spec	es?		Number of Dominant Species 2
1 Box Elder) Acer Negundo	25	- X		FACH	That Are OBL, FACW, or FAC: (A)
2. Acer Sachwinem Silvempt		_ <u>y</u> _		FACW	Total Number of Dominant
3					Species Across All Strata: (B)
†					Percent of Dominant Species
5					That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size: 706 f+2)		= Tota	Cov	/e r	Prevalence Index worksheet:
1. Cephalanthus occidentalis	25	X		OBL	Total % Cover of:Multiply by:
2. (button buch)					OBL species 25 x1= 75
3.					FACW species SD x2= 100
4.					FAC species x 3 =
5.					FACU species x 4 =
	25	= Tota	l Cov	/er	UPL species x 5 =
Herb Stratum (Plot size:)					Column Totals: 75 (A) 125 (B)
1					
2					Prevalence Index = B/A = 1.6
3					Hydrophytic Vegetation Indicators:
4					Dominance Test is >50%
5					Prevalence Index is ≤3.0¹
6					Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7.					Problematic Hydrophytic Vegetation¹ (Explain)
8.					
9					¹Indicators of hydric soil and wetland hydrology must
10.					be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		= Tota	l Cov	er	
					Hydrophytic
1					Venetation
2		= Tota	100		Present? Yes No
		- :010	. 000		
Remarks: (Include photo numbers here or on a separate s	heet.)				
Space Area invadated wi	#h ha	he.	rb.	stratu.	nin general area

Depth Matrix Redox Features Toolor (moist) % Color (moist) % Type Loc Loc Texture Remarks	Profile Description: (Describe to Depth Matrix	the depth heed				OI COMMI	III the abactice	of malcators.)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Matrix, CS=Covered Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Matrix, CS=Covered Matrix, CS=Covered Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Matrix, CS=Covered Matrix, CS=C		% Color				Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion And Metrix, CS=Covered Sand Grains, CS=Covered		80 750	416	20	C	M	SILL	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Indicators for Problematic Hydric Solis*: **Indicators for Problematic Hydric Solis*: **Indicators for Problematic Hydric Solis*: **Coast Prairie Redox (A16)*: **Loamy Gleyed Matrix (S8)*: **Loamy Gleyed Matrix (F2)*: **Loamy Gleye	10 01			20	0	M	SILL	
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)				· —				
Mydric Soll Indicators:								
Histosol (A1) Histoc Epipedon (A2) Histoc (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Depieted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (B1) Som Mucky Mineral (B1) For Mucky Mineral (B1) For Mucky Pact or Peat (B3) Lestrictive Layer (If observed): Type: Depit (inches): Hydric Soil Present? Yes Water Marks (B1) Water Marks (B1) Water Marks (B1) For Mucky Bill (B1) For Mucky B		ion, RM=Reduce	d Matrix, CS	S=Covere	d or Coate	ed Sand G	Grains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) Black Histic (A3) Slack Histic (A3) Slack Histic (A3) Slack Histic (A3) Straffed Layers (A5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F3) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sendy Mucky Mineral (S1) Sendy Mucky Mineral (S1) Sendy Mucky Mineral (S1) Sendy Mucky Mineral (S1) Setrictive Layer (If observed): Type: Deplt (inches): Deplt (inches): Wetland Hydrology indicators: Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No	lydric Soil Indicators:						Indicators	for Problematic Hydric Solls ³ :
Stratified Layers (A5) 2 cm Muck (A10) 3 celepted Below Dark Surface (A11) 3 candy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) 5 cm Mucky Peat or Peat (S3) 4 Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) 4 Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) 6 cm Active Redox Depressions (F8) 7 cm Active Redox Depress	Histic Epipedon (A2)	-	Sandy F	Redox (SS	5)		Iron-M	langanese Masses (F12)
Depleted Bellow Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) South Mucky Mineral (S1) South Mucky Mineral (S1) South Mucky Peat or Peat (S3) Restrictive Layer (If observed): Type: Depth (inches): D	Stratified Layers (A5)	-	_ Loamy	Gleyed M	atrix (F2)			
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Water-Stained Leaves (B9) Water-Stained Leaves (B9) Water-Stained Leaves (B9) Water Marks (B1) Seaturation (A3) Water Marks (B1) Seaturation (A3) Water Marks (B1) Seaturation (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Selection Remarks (B10) Depth (inches): Water Table (C9) Water Table (C9) Seauge or Well Data (D9) Seauge or Well Data (
Sandy Mucky Mineral (S1)		_	Deplete	d Dark St	urface (F7)	3Indicators	s of hydrophytic vegetation and
POROLOGY Vetland Hydrology Indicators: Veriand Hydrology Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Fauna (B13) Water Marks (B1) Secondary Indicators (minimum of two required; check all that apply) Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Thin Muck Surface (C7) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Ieid Observations: Urface Water Present? Yes No Depth (inches): Alturation Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches):	Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	3	X Redox □	Depressio	ons (F8)		wetlan	d hydrology must be present,
Popth (inches):	Restrictive Layer (if observed):							4
Wetland Hydrology Indicators: Irimary Indicators (minimum of one is required; check all that apply) ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Aquatic Fauna (B13) ✓ Hydrogen Sulfide Odor (C1) ✓ Sediment Deposits (B2) ✓ Oxidized Rhizospheres on Living Roots (C3) ✓ Algal Mat or Crust (B4) ✓ Indicators (Minimum of two required; check all that apply) ✓ Sediment Deposits (B3) ✓ Presence of Reduced Iron (C4) ✓ Indicators (Minimum of two required; check all that apply) ✓ Saturation (A3) ✓ Aquatic Fauna (B13) ✓ Dry-Season Water Table (C2) ✓ Crayfish Burrows (C8) ✓ Saturation Visible on Aerial Imagery (C1) ✓ Indicators (Minimum of two required; check all that apply) ✓ Sediment Deposits (B2) ✓ Oxidized Rhizospheres on Living Roots (C3) ✓ Saturation Visible on Aerial Imagery (C1) ✓ Geomorphic Position (D2) ✓ Inon Deposits (B5) ✓ Indicators (Minimum of two required; check all that apply) ✓ Sparsely Vegetated Concave Surface (B8) ✓ Oxidized Rhizospheres on Living Roots (C3) ✓ Saturation Visible on Aerial Imagery (C1) ✓ Geomorphic Position (D2) ✓ Sparsely Vegetated Concave Surface (B8) ✓ Other (Explain in Remarks) Ield Observations: Inface Water Present? ✓ Yes No Depth (inches): Inface Water Present? ✓ Yes No Depth (,,	*						V
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one is required; check all that apply) ✓ Surface Water (A1) ✓ High Water Table (A2) ✓ Aquatic Fauna (B13) ✓ Surface (B3) ✓ Water Marks (B1) ✓ Water Marks (B1) ✓ Presence of Reduced Iron (C4) ✓ Iron Deposits (B3) ✓ Recent Iron Reduction in Tilled Solis (C6) ✓ Inundation Visible on Aerial Imagery (B7) ✓ Sparsely Vegetated Concave Surface (B8) ✓ Other (Explain in Remarks) Vetland Hydrology Present? Yes No Depth (inches): ✓ Water Marks (B9) ✓ Water Marks (B1) ✓ Presence of Reduced Iron (C4) ✓ Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) ✓ FAC-Neutral Test (D5) ✓ Inundation Visible on Aerial Imagery (B7) ✓ Sparsely Vegetated Concave Surface (B8) ✓ Other (Explain in Remarks) Vetland Hydrology Present? Yes No Depth (inches): ✓ Wetland Hydrology Present? Yes No Depth (inches):	Depth (inches):	140					1	
Surface Water (A1) Water-Stained Leaves (B9) Water Table (A2) Water Marks (B1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Depth (inches): Water Marks (B1) Drift Deposits (B2) Caryfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Water Marks (B8) Drift Deposits (B8) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Aquatic Fauna (B13) Drianage Patterns (B10) Caryfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Possits (B3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No No Depth (inches): Water Table Present? Yes No No Depth (inches):			*)				Hydric Soli	Present? Yes No
Water Stained Leaves (B9) Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Aquatic Fauna (B13) Drainage Patterns (B10) Aquatic Fauna (B13) Drainage Patterns (B10) True Aquatic Plants (B14) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Iron Deposits (B4) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Cyparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Depth (inches): Water Table Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks:						Hydric Soli	Present? Yes No
A High Water Table (A2) A Saturation (A3) Mater Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Cield Observations: Surface Water Present? Ves No Depth (inches): Saturation (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Iron Deposits (B5) Condition Number of Reduced Iron (C4) Condition Number of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Iron Deposits (B5) Condition Number of Reduced Iron (C4) Stunted or Stressed Plants (D1) Condition Number of Reduced Iron (C4) Condition In Illied Soils (C6) Conditio	Remarks: YDROLOGY						Hydric Soli	Present? Yes No
X Saturation (A3)	Remarks: YDROLOGY Wetland Hydrology Indicators:	is required; chec	k all that ap	ply)				
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2)	Primary Indicators:	is required; chec			res (B9)		Seconda	ary Indicators (minimum of two requ
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Depth (inches): Surface Water Table Present? Yes No Depth (inches): Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Wetland Hydrol ogy Present? Yes No Depth (inches): Saturation Visible on Aerial Imagery (C9) Square or Reduced Iron (C4) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Wetland Hydrol ogy Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Wetland Hydrol ogy Present? Yes No No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Presen	YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one) Verification Surface Water (A1)		Water-Stai	ned Leav		*	Seconda	ary Indicators (minimum of two requ face Soil Cracks (B6)
Drift Deposits (B3)	YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one) Your Surface Water (A1) High Water Table (A2)		Water-Stai Aquatic Fa	ned Leav una (B13	3)		Seconda Sur Dra	ary Indicators (minimum of two requ face Soil Cracks (B6) inage Patterns (B10)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)	YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	<u>x</u>	Water-Stai Aquatic Fa True Aqua Hydrogen	ined Leav iuna (B13 tic Plants Sulfide O	(B14) dor (C1)		Seconda Sur Dra Dry Cra	ary Indicators (minimum of two requ face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)
Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) ield Observations: surface Water Present?	YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	<u>x</u>	Water-Stai Aquatic Fa True Aqua Hydrogen	ined Leav iuna (B13 tic Plants Sulfide O	(B14) dor (C1)	ing Roots	Seconda Sur Dra Dry Cra	ary Indicators (minimum of two requ face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) ield Observations: urface Water Present?	YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	<u>x</u>	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Leav iuna (B13 tic Plants Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Liv ed Iron (C4	4)	Seconda Sur Dra Dry Cra (C3) **E Satu	ary Indicators (minimum of two requ face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) ileid Observations: surface Water Present?	Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	<u>x</u>	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Leav iuna (B13 tic Plants Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Liv ed Iron (C4	4)	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
Sield Observations: Surface Water Present? Yes No Depth (inches): 8-12 Water Table Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches): No De	Primary Indicators (minimum of one Material Mate	<u>x</u> x 	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro	ined Leav iuna (B13 tic Plants Sulfide O Rhizosphe of Reduce n Reducti	(B14) dor (C1) eres on Lived Iron (C4) ion in Tille	4)	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
Vater Table Present? Yes No Depth (inches): 8-12 Vater Table Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches): No Depth (inches): No Depth (inches): Wetland Hydrol ogy Present? Yes No Depth (inches): No Depth (inc	Primary Indicators (minimum of one Mary Indicators (minimum of one Mary Indicators (minimum of one Mary Indicators (Mary Indi	メ 一 メ ー ー gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge or N	ined Leaviuna (B13 tic Plants Sulfide O Rhizosphe of Reduce n Reducti Surface (Well Data	(B14) dor (C1) eres on Lived Iron (C4) ion in Tille (C7) (D9)	4)	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
Vater Table Present? Yes No Depth (inches): returnation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No noting capillary fringe) Pescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indicators (minimum of one Mary Indicators (minimum of one	メ 一 メ ー ー gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge or N	ined Leaviuna (B13 tic Plants Sulfide O Rhizosphe of Reduce n Reducti Surface (Well Data	(B14) dor (C1) eres on Lived Iron (C4) ion in Tille (C7) (D9)	4)	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
raturation Present? Yes No Depth (inches): Wetland Hydrol ogy Present? Yes No ncludes capillary fringe) Prescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or V Other (Exp	ned Leavena (B13 tic Plants Sulfide Or Reduce n Reducti Surface (Well Data olain in Reductin Reducti Surface (Well Data	(B14) (B14) dor (C1) eres on Liv ed Iron (C4) ion in Tille (C7) (D9) ermarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
ncludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indicators (minimum of one Surface Water (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surield Observations:	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or V Other (Exp	ned Leavena (B13 tic Plants Sulfide Or Reduce n Reducti Surface (Well Data olain in Reductin Reducti Surface (Well Data	(B14) (B14) dor (C1) eres on Liv ed Iron (C4) ion in Tille (C7) (D9) ermarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) X Satu Stur 6) X Geo	ary Indicators (minimum of two requiface Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
	Primary Indicators (minimum of one Surface Water (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Yes	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or V Other (Exp	ined Leaver in the property in	(B14) (B14) dor (C1) eres on Liv ed Iron (C4) dion in Tille (C7) (D9) ermarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) ** Satu Stur 6) ** FAC	ary Indicators (minimum of two requires Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Remarks:	Primary Indicators (minimum of one Marks: Primary Indicators (minimum of one Marks (Marks (M	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N Other (Exp	ined Leaver in the control of Reduces in Red	(B14) (dor (C1) eres on Liv ed Iron (C4) ion in Tille (C7) (D9) emarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) Y Satu Stur 6) Y Geo	ary Indicators (minimum of two requires Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
	Primary Indicators (minimum of one Surface Water (A1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Vater Table Present? Yes aturation Present? Yes Includes capillary fringe)	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N Other (Exp	ined Leaver in the control of Reduces in Red	(B14) (dor (C1) eres on Liv ed Iron (C4) ion in Tille (C7) (D9) emarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) Y Satu Stur 6) Y Geo	ary Indicators (minimum of two requires Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
	YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Vester Table Present?	gery (B7)	Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N Other (Exp	ined Leaver in the control of Reduces in Red	(B14) (dor (C1) eres on Liv ed Iron (C4) ion in Tille (C7) (D9) emarks)	4) d Soils (C	Seconda Sur Dra Dry Cra (C3) Y Satu Stur 6) Y Geo	ary Indicators (minimum of two requires Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Adjacent property to 10.	try drilling CHYK	County: Cryste	I City HERRENS	Sampling Date: 10-	-18-11
pplicantiamer Darciel Culeman			State: <u>M 0</u>	Sampling Point:	<u> </u>
investigator(s): Crank	Secti	on, Township, R	ange: S7 T	10 N RGE	
Landform (hillslope, terrace, etc.) Cuthof Slove	L /CHANNEL AREA	Loical relie	(concave, convex, non	e): Concure	
Slope (%): 0-3 Lat: 38°11' 21.04"			25.97"W	Datum: 5TH ALIN	ca par d
	4~				CURKSTA
			•		WATE
Are climatic / hydrologic conditions on the site typica			(If no, explain in	· · · · · · · · · · · · · · · · · · ·	
Are Vegetation No., Soil No., or Hydrology	significantly disturbed	rbed? Are	*Normal Circumstances	present? Yes	No
Are Vegetation 6 , Soil 6 or Hydrology	naturally problem	atic? (If n	eeded, explain any ansi	wers in Remarks.)	
SUMMARY OF FINDINGS - Attach site	map showing san	pling point	locations, transec	ts, important featur	es, etc.
Hydrophytic Vegetation Present? Yes	No	is the Sample	d Ame		
1	No	within a Wetla	_	No ·	
Wetland Hydrology Present? Yes	No	Astrini e Aadrig	illur res	100	. *
Remarks:					
T. Company	**		:		
			·		
VEGETATION Use scientific names of p		·			
Tree Stratum (Plot size: 2827 ff)	Absolute Dor <u>% Cover Spe</u>	ninant Indicator	Dominance Test wo		
1. Acer sachannen (Sturk	<i>j</i> ,	FACW	Number of Dominant That Are OBL, FACV		_ (A)
2. Overcus palustris (Pin Oak)	25 V	FALW	•		- (7)
3.		•	Total Number of Don Species Across All S		(B)
4			1 .		_ (5)
š .			Percent of Dominant That Are OBL, FACV		e (A/B)
	205 = Tol	al Cover	macAle OBL, FACY	V, OF FAC	Z (AVD)
Sapling/Shrub Stratum (Plot size:)		Prevalence Index w	orksheet:	
1. Ulmus rubra (slippery elm	<u>) 10 N</u>	o PAC	Total % Cover of	Multiply by:	
2			OBL species	x1=	
3			FACW species _/ 0		-
4	نئے کیونے			0 x3= 30	
5			FACU species		
Harb Stratum (Plot size:	= Tot	al Cover	UPL species	X5=	
Herb Stratum (Plot size:)			Column Totals: 11	5 (A) <u>740</u>	(B)
1			Prevalence Ind	ex = B/A = 2.48	
3			Hydrophytic Vegets		
4.			Dominance Test		
			Prevalence Inde		
5			Morphological A	daptations¹ (Provide supp	orting
7		·	data in Rema	rks or on a separate shee	et)
8.			Problematic Hyd	rophytic Vegetation ¹ (Exp	lain)
9.			4		
10.				soil and wetland hydrolog sturbed or problematic.	y must
•	= Tol	al Cover	ne bresein' niness di	attived of problematic.	·
Woody Vine Stratum (Plot size:	.)	,			
1			Hydrophytic		
2.			Present?	Yes X No	
	= Tot	al Cover			
Remarks: (Include photo numbers here or on a sen	parate sheet.)		<u> </u>	·	
1 2	= Tol	al Cover	Vecetation	Yes No	•

OIL				 					Sampling Point:
Profile Descrip	tion: (Describe	to the de	pth needed	to docun	nent the	Indicator	or confir	n the absence	e of indicators.)
Depth	Matrix		O-l		x Feature		12		
inches)	Color (moist)	%	Color			_Type'	Loc2	Texture	Remarks
	Dyr 4/2		2.5yr		20	ــــــــــــــــــــــــــــــــــــــ	<u>~</u>	SILL	
-16 (byr 4/2	15	7.5yr	5/6	15	<u> </u>	<u>M</u>	SICH	
				,		-			
<u> </u>				·		·			
	entration, D=Dep	oletion, RM	A=Reduced	Matrix, CS	=Covere	d or Coate	d Sand G	rains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
dric Soil Ind									s for Problematic Hydric Solis ³ :
_ Histosol (A1	•					atrix (S4)			Prairie Redox (A16)
Histic Epipe					ledox (S5	-			Manganese Masses (F12)
Black Histic					Matrix (8			Other	(Explain in Remarks)
_ Hydrogen S				-	•	neral (F1)			
Stratified La 2 cm Muck			7	_ Loamy C _ Depleted		atrix (F2) F3)			
_	elow Dark Surfac	e /A11\	<u></u>		ank Surfa	-			
,	Surface (A12)		_			rface (F7)		⁹ Indicator	s of hydrophytic vegetation and
-	cy Mineral (S1)				epressio				nd hydrology must be present,
	Peat or Peat (S:	3)		. 11000000	.00.00.0	(. 0)			s disturbed or problematic.
	er (if observed):							T	
Type:									
r Abe.									
Denth (inches	s):						•	Hydric Soi	Present? Yes X No
Depth (inchesemarks:	B):				No. 4			Hydric Soi	I Present? Yes X No
	s):				Wage -			Hydric Soi	I Present? Yes X No
marks:								Hydric Soi	I Present? Yes X No
marks:								Hydric Soi	Present? Yes X No
marks: DROLOGY tland Hydrol		ne is requ	ired; check	all that apr	oly)				
marks: DROLOGY otland Hydrol	ogy Indicators: rs (minimum of o	ne is requ		all that apr		es (B9)		Second	ary Indicators (minimum of two requi
DROLOGY otland Hydrol	ogy Indicators: rs (minimum of o	ne is requ	ΧV		ned Leave			Second	
DROLOGY etland Hydrol many Indicator Surface Wat	ogy Indicators: rs (minimum of o er (A1) Table (A2)	ne is requ	<u>_</u>	Vater-Stair Iquatic Fac	ned Leavi)		Second Second Dra	ary Indicators (minimum of two requir face Soll Cracks (B6) Inage Patterns (B10)
DROLOGY Itland Hydrol many Indicator Surface Wat High Water Saturation (A	ogy Indicators: rs (minimum of o ter (A1) Table (A2)	ne is requ	v <u>k</u> 	Vater-Stair quatic Fac rue Aquat	ned Leave una (B13) ic Plants) (B14)		Second Sur Dra Dry	ary Indicators (minimum of two requir face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2)
DROLOGY Itland Hydrol mary Indicator Surface Wat High Water Saturation (A	ogy Indicators: rs (minimum of o	ne is requ		Vater-Stair Aquatic Fac True Aquati Hydrogen S	ned Leave una (B13) ic Plants Sulfide Oc) (B14) dor (C1)	na Roots	Second Sur Dra Dry Cre	ary indicators (minimum of two requi face Solf Cracks (B6) linage Patterns (B10) -Season Water Table (C2) lyfish Burrows (C8)
DROLOGY Petland Hydrol mary Indicator Surface Wat High Water Saturation (A	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2)	ne is requ	<u>x</u> v _ r _ r	Vater-Stair Aquatic Fac True Aquati Hydrogen S Oxidized Ri	ned Leave una (B13) ic Plants Sulfide Ochizosphe) (B14) dor (C1) res on Livi	•	Second Sur Dra Dra Cra (C3) Sat	ary Indicators (minimum of two required face Solf Cracks (B6) (Inage Patterns (B10)) -Season Water Table (C2) (C8) (C8) (C8) (C8) (C9) (C9) (C9) (C9) (C9) (C9) (C9) (C9
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3)	ne is requ	X v ^ T C	Vater-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o	ned Leave una (B13 ic Plants Sulfide Och hizosphe if Reduce) (B14) dor (C1) res on Livi ed Iron (C4)	Second Sur Dra Dra Cra (C3) Sat	ary Indicators (minimum of two requirence Solf Cracks (B6) Inage Patterns (B10) Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1)
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	ogy indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4)	ne is requ	X V A T C F	Vater-Stair Aquatic Fau True Aquati Hydrogen S Dxidized Ri Presence of Recent Iron	ned Leave una (B13) ic Plants Sulfide Och hizosphe if Reduce n Reduction) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled)	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1) Incomorphic Position (D2)
DROLOGY Interpretation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5)		X V — A — T — C — F — T	Vater-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of Recent Iron Thin Muck	ned Leave una (B13) ic Plants Sulfide Och hizosphe if Reduction Surface ((B14) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7))	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1)
DROLOGY Interpretation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) (isible on Aerial In	magery (B	± v	Vater-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck S Bauge or V	ned Leave una (B13) ic Plants Sulfide Od hizosphe if Reduce n Reducti Surface () (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9))	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1) Incomorphic Position (D2)
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Ingetated Concave	magery (B	± v	Vater-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence of Recent Iron Thin Muck	ned Leave una (B13) ic Plants Sulfide Od hizosphe if Reduce n Reducti Surface () (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9))	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1) Incomorphic Position (D2)
DROLOGY Interpolation of the properties of the	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Ingetated Concave	magery (B Surface (X V A T F T T F T T T T T T T T T T T	Vater-Stair Aquatic Fau True Aquati Hydrogen S Dxidized Ri Presence of Recent Iron Thin Muck S Bauge or V Other (Expl	ned Leave una (B13) ic Plants Sulfide Och hizosphe if Reduce i Reducti Surface (Vell Data lain in Re) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9))	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1) Incomorphic Position (D2)
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Veg	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Ingetated Concave	magery (B s Surface (X VATF	Vater-Stair Aquatic Fau True Aquati fydrogen S Dxidized Ri Presence of Recent Iron Thin Muck S Bauge or V Other (Expl	ned Leavi una (B13) ic Plants Sulfide Od hizosphe if Reduce i Reducti Surface (Vell Data lain in Re) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9))	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two requires face Solf Cracks (B6) Inage Patterns (B10) -Season Water Table (C2) Institution Visible on Aerial Imagery (C9) Inted or Stressed Plants (D1) Incomorphic Position (D2)
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Ver Id Observation	ogy indicators: rs (minimum of ore) er (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial ingetated Concave ons: resent?	magery (B Surface (es	X VATF	Vater-Stair Aquatic Fau True Aquati Hydrogen S Dxidized Ri Presence of Recent Iron Thin Muck S Bauge or V Other (Expl	ned Leavi una (B13) ic Plants Sulfide Od hizosphe if Reduce i Reducti Surface (Vell Data lain in Re) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9)) is Soils (CE	Second Sur Dra Dry Cra (C3) Sat X Get X FA	ary Indicators (minimum of two require face Solf Cracks (B6) (Inage Patterns (B10) (C2) (Inage Patterns (C8) (C8) (Inagery (C8) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (Inager
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Vegeld Observation after Table Preseturation Presen	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Ingetated Concave ons: resent? yesent? yesent? yesent? yesent? yesent?	magery (B Surface (es	X VATF	Vater-Stair Aquatic Fau True Aquati fydrogen S Dxidized Ri Presence of Recent Iron Thin Muck S Bauge or V Other (Expl	ned Leavi una (B13) ic Plants Sulfide Od hizosphe if Reducte n Reducte Surface (Vell Data lain in Re hes):) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilled (C7) (D9)) is Soils (CE	Second Sur Dra Dry Cra (C3) Sat Stu	ary Indicators (minimum of two require face Solf Cracks (B6) (Inage Patterns (B10) (C2) (Inage Patterns (C8) (C8) (Inagery (C8) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (Inager
DROLOGY etland Hydrol mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Ver Id Observation face Water Presented	ogy Indicators: rs (minimum of original for (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial in getated Concave ons: resent? yesent? yesent? yesent? yesent? yesent?	magery (B Surface (es es es	X V A T F (B8) No X No X No X	Vater-Stair Aquatic Fau True Aquati Aydrogen S Dxidized Ri Presence of Recent Iron Thin Muck I Bauge or V Other (Expl Depth (incl Depth (incl Depth (incl	ned Leave una (B13) ic Plants Sulfide Od hizosphe if Reducte in Reducte Surface (Vell Data lain in Re hes): hes):	(B14) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilleo (C7) (D9) emarks)) Soils (Cf	Second Sur Dra Dry Cra (C3) Sat Stu X Ger X FA	ary Indicators (minimum of two require face Solf Cracks (B6) (Inage Patterns (B10) (C2) (Inage Patterns (C8) (C8) (Inagery (C8) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (Inager
DROLOGY etland Hydrol imary Indicator Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits Inundation V Sparsely Vereid Observation rface Water Preserturation Preser	ogy Indicators: rs (minimum of orer (A1) Table (A2) A3) s (B1) eposits (B2) s (B3) Crust (B4) s (B5) risible on Aerial Ingetated Concave ons: resent? yesent? yesent? yesent? yesent? yesent?	magery (B Surface (es es es	X V A T F (B8) No X No X No X	Vater-Stair Aquatic Fau True Aquati Aydrogen S Dxidized Ri Presence of Recent Iron Thin Muck I Bauge or V Other (Expl Depth (incl Depth (incl Depth (incl	ned Leave una (B13) ic Plants Sulfide Od hizosphe if Reducte in Reducte Surface (Vell Data lain in Re hes): hes):	(B14) (B14) dor (C1) res on Livi ed Iron (C4 on in Tilleo (C7) (D9) emarks)) Soils (Cf	Second Sur Dra Dry Cra (C3) Sat Stu X Ger X FA	ary Indicators (minimum of two require face Solf Cracks (B6) (Inage Patterns (B10) (C2) (Inage Patterns (C8) (C8) (Inagery (C8) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (C9) (C9) (Inagery (Inager

Preliminary Jurisdictional Determination Photo Documentation



Photo 1a – Saturated sedimentation filling in portion of unnamed tributary and the culvert under the railroad connecting the site to the wetlands near sample point 2 and photo 5 (April 2010).

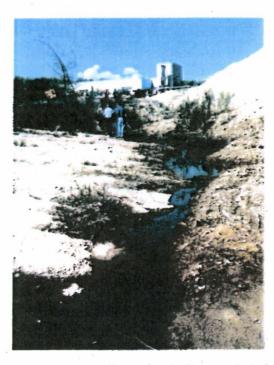


Photo 1b – Remnants of unnamed tributary facing upstream towards Rotary Drilling Building (April 2010).



Photo 2a – Portion of Willer Lake Filled In with Riprap Berm Reportedly required by MDNR for an erosion control measure around the calcium sulfate and fly ash (April 2010).

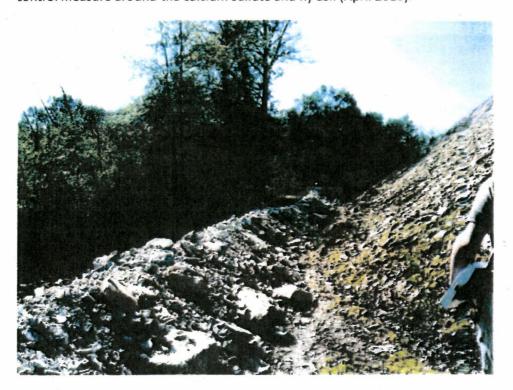


Photo 2b —Portion of Willer Lake and Forested Wetland filled in with a riprap berm reportedly required by MDNR for an erosion control measure around the calcium sulfate and fly ash (April 2010).

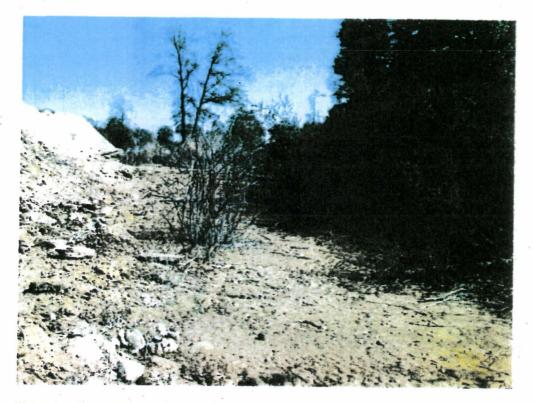


Photo 3 – Saturated area between the fill material and the railroad (April 2011).

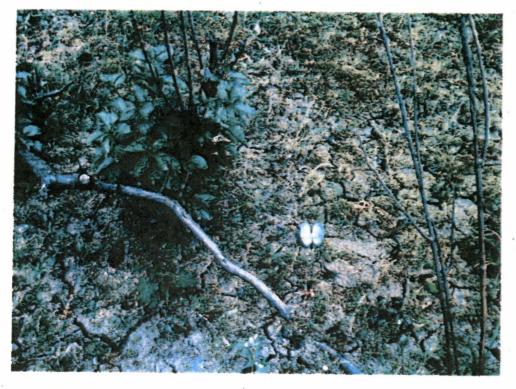


Photo 4a – Adjacent Wetland Sample Point 1 (October 2011).



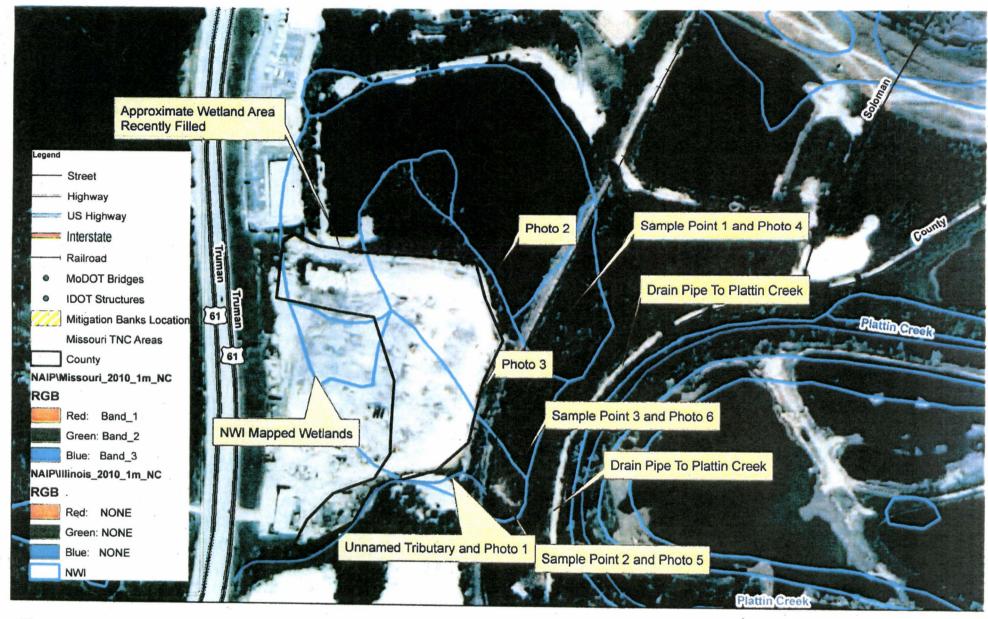
Photo 4b – Near Sample Point 1 showing flow from wetland areas through c ulvert to Plattin Creek (October 2011).



Photo 5-Adjacent Wetland Sample Point 2 (October 2011).



Photo 6 – Adjacent Wetland Sample Point 3 (October 2011).



Rotary Drilling 2007 Aerial Photo Map Project Location Map - MVS-2009-774 Crystal City, Jefferson County, Missouri



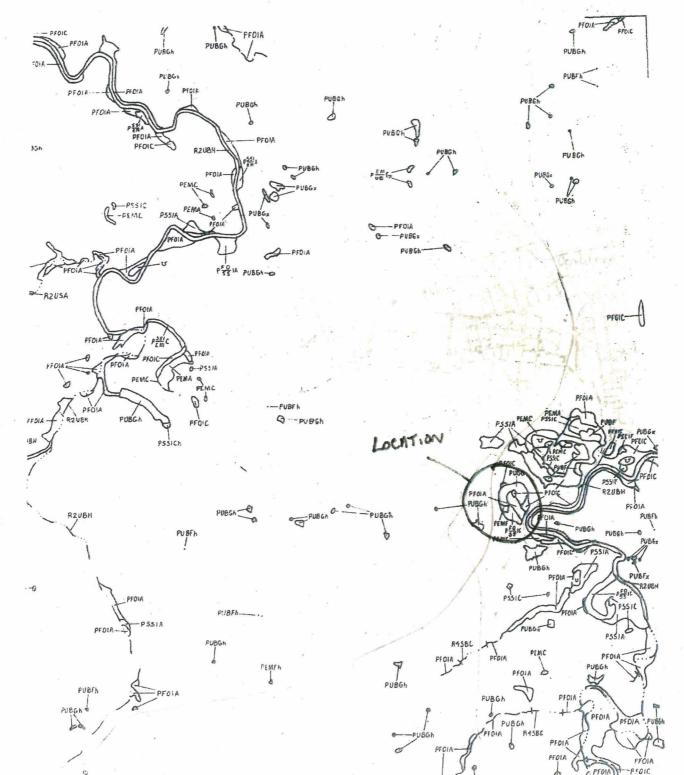


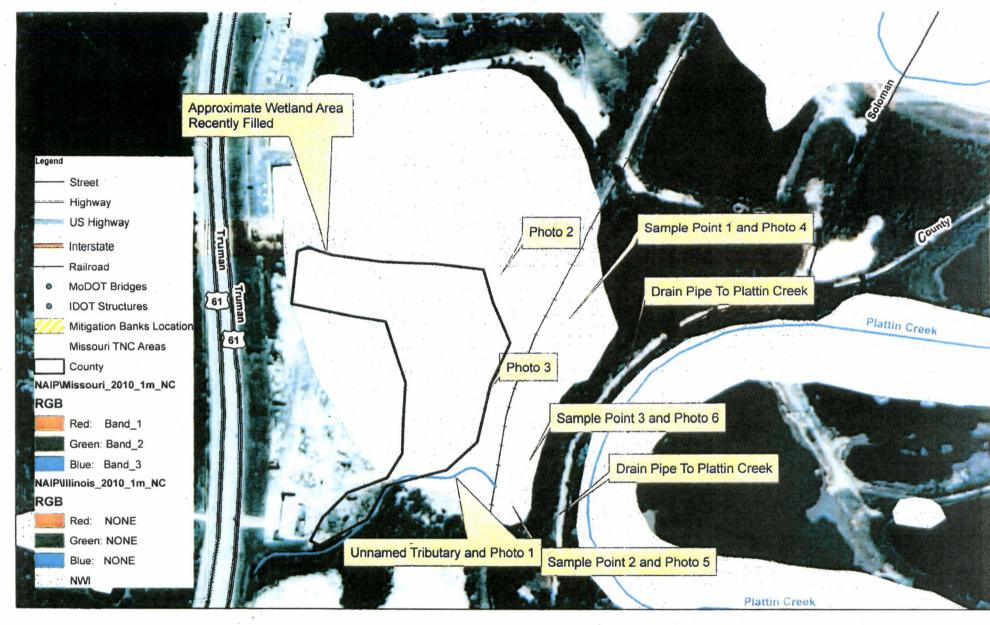


St Louis District

FLANDS INVENTORY

PARTMENT OF THE INTERIOR





Rotary Drilling NWI Map
Project Location Map - MVS-2009-774
Crystal City, Jefferson County, Missouri

8





US Army Corps of Engineers (8) St Louis District



FW: preliminary jd

Gramke, Robert MVS to: Delia Garcia, Christopher Muehlberger

11/02/2011 07:37 AM

From:

"Gramke, Robert MVS" < Robert.Gramke@usace.army.mil>

To:

Delia Garcia/R7/USEPA/US@EPA, Christopher Muehlberger/R7/USEPA/US@EPA

History:

This message has been replied to.

1 attachment



document2011-11-02-072359.pdf

Delia and Chris,

This is a draft of my updated preliminary JD of the site. In order to do an approved JD, we would have to be back on site and some of the fill material would have to be removed. This would have to be done in coordination with the parties involved and is usually the responsibility of the alleged violator if they want to challenge the preliminary determination.

I did find an approved JD that Shawn completed for the unnamed tributary that flows through the site. I will send that in the next email. Please review both documents and let me know a good time to call and discuss them.

Rob

----Original Message----

From: Robert.Gramke@usace.army.mil [mailto:Robert.Gramke@usace.army.mil]

Sent: Wednesday, November 02, 2011 7:24 AM

To: Gramke, Robert MVS Subject: preliminary jd

Please see the attached document.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

A. Report Completion Date for Preliminary Jurisdictional Determination (JD):

January 12, 2010 (updated 11-1-11)

B. Name and Address of Person Requesting Preliminary JD:

Mr. Darriel Coleman Rotary Drilling Supply, Inc. P.O. Box 302 1150 S. Truman Boulevard Crystal City, Missouri 63028

C. District Office, File Name, and Number:

St. Louis Dist., Coleman Rotary Drilling Supply Filling in Floodplain, MVS-2009-774

D. PROJECT LOCATION(S), BACKGROUND INFORMATION, AND WATERS:

State: Missouri City: Crystal City County: Jefferson

Name of nearest waterbody: Plattin Creek The wetland area appears to be a wetland slough and/or cutoff channel that permanently held water adjacent to and abutting Plattin Creek, which flows directly to the Mississippl River. There is a railroad track and an abandoned county road between the wetland area and Plattin Creek, but the hydrologic connection remains due to soil texture, culverts, porous railroad embankment, and frequent flooding. The area is frequently flooded by backwater effects of the Mississippi River. Inundation of the area is evident on the aerial photography and on-site evidence such as aquatic fauna, sediment deposits, drift lines, water lines, and large cracks in the ground surface. The culverts are visible from the Coleman Property and from the abandoned County Road.)

Identify amount of waters in the review area: Approximately 1200 linear feet of intermittent tributary and approximately 11 Acres of wetland. Based on aerial photography, approximately 5.8-acres of wetland and 500 linear feet of tributary channel have been impacted over the last five years and the majority within the last 3 years. This determination is approximate because the area is already filled. Additional measurements would be required for a final determination. An approved JD could not be completed until a portion of the fill is removed and would be the responsibility of the alleged violator).

Name of any water bodies on the site that have been identified as Section 10 waters: Tidal:

Non-Tidal:

Table 1 - Waters of the U.S.	Table :	L Waters	of the U.S.
------------------------------	---------	----------	-------------

Site #	Latitude	Longitude	Stream Flow	Cowardin Class	Estimated amount of aquatic resources in review area	Estimated amount of aquatic resource impact	Class of aquatic resource
1	38.206700	-90.392328	Intermittent	Riverine	1200 linear feet	500 linear feet in the past 5 years	Non-tidal
2	38.206700	-90.392328	Wetland	PEM/PFO/ PFOSS	11 - Acres	5.8 – Acres in past 5 years	Non-tidal
					4		

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

\boxtimes	Office (Desk) Deter	rmination.	Date: 1/12/10 (Visited the s	site on this s	ame date, l	but nearly
the	entire area is filled.	The remain	ning portion of	ftributary an	d wetland is	disturbed)).

Field Determination. Date(s): 1/12/10 and 10/18/11 (Approved Determination Not Completed at this time since the entire area on the property appeared to be filled. Adjacent Areas were visited on 10/18/11 to collect data sheets, verify wetlands adjacent to fill area, and confirm the National Wetland Inventory Determination. Adjacent areas are wetland area as shown on the National Wetland Inventory Maps).

F. SUPPORTING DATA:

Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

\bowtie	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Google
Ear	th Pro (1996, 2003, 2008, 2010)
	Data sheets prepared/submitted by or on behalf of the applicant/c onsultant.
	Office concurs with data sheets/delineation report.
	Office does not concur with data sheets/delineation report.
\boxtimes	Data sheets prepared by the Corps: 10/18/11.
	Corps navigable waters' study:
	U.S. Geological Survey Hydrologic Atlas: .
	USGS NHD data.
	USGS 8 and 12 digit HUC maps.
\boxtimes	U.S. Geological Survey map(s). Cite quad name: Festus.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey -
Jef	ferson County.
\boxtimes	National wetlands inventory map(s). Cite name: Festus.
	State/Local wetland inventory map(s):
П	FEMA/FIRM mans:

	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	Photographs: Aerial (Name & Date): Google Earth Pro - 1996, 2002,2003, 2004,2005, 2007, 2008, 2010.
	or Other (Name & Date): Site Visit Photos April 2010 and October 2011. Previous determination(s). File no. and date of response letter: MVS-2007-415
	(Approved JD on the unnamed tributary) .
•	Other information (please specify): An additional meeting occurred in April 2010 with Mr. Dariel Coleman, Mr, Jerry West, Mr. Raju Kakarlapudi (USEPA), Mr. Rob Gramke (USACE), Ms. Jaynie Doerr (USACE), and Mr. Matt Cosby (USACE). During the meeting the unnamed tributary was flowing along the base of the fill and the area around the base of the fill appeared to be saturated. Mr. Coleman (owner of the area) agreed that the area was mucky wet area prior to the fill being placed in the area. At one time the area was known as Willer's Lake. Mr. Coleman also stated that he had no idea that a Section 404 permit was needed for this type of activity.
IN	IPORTANT NOTE: The information recorded on this form has not necessarily been
	rified by the Corps and should not be relied upon for later jurisdictional determinations

G. EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

Signature and date of

(REQUIRED)

Regulatory Project Manager

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

Signature and date of

signature is impracticable)

person requesting preliminary JD (REQUIRED, unless obtaining the

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the

permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization: (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site. or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity. based on the information listed above.